

**CLAIMS**

1. A method for generating monoclonal antibodies in a rodent comprising the steps of:

- a) administering a dendritic cell expansion agent to the rodent;
- b) administering a dendritic cell maturation agent to the rodent;
- c) immunizing the rodent with an antigen; and
- d) isolating antigen-specific antibodies.

2. The method of claim 1 wherein the dendritic cell expansion agent is Flt3 ligand (Flt3L).

3. The method of claim 2 wherein Flt3L is administered in combination with another dendritic cell expansion agent.

4. A method for generating monoclonal antibodies in a rodent comprising the steps of:

- a) administering a dendritic cell maturation agent to the rodent;
- b) immunizing the rodent with an antigen; and
- c) isolating antigen-specific antibodies.

5. The method of claim 1 or 4 further comprising the step of administering a CD40 agonist post-immunization.

6. The method of claim 1 or 4 wherein the dendritic cell maturation agent is a type I interferon, tissue necrosis factor- $\alpha$ , interleukin-6, prostaglandin-E2, interleukin-1 $\alpha$ , interleukin-1 $\beta$ , interleukin-18, interleukin-12, interleukin-4, interleukin-23, interferon- $\gamma$ , granulocyte-macrophage colony-stimulating factor or dendritic cell associated maturation factor agonist monoclonal antibody.

7. The method of claim 6 wherein the dendritic cell maturation agent is administered singly or in combination with

another dendritic cell maturation agent.

8. The method of claim 6 wherein the dendritic cell associated maturation factor agonist monoclonal antibody is anti-  
5 CD40.

9. The method of claim 6 wherein the type I interferon is interferon- $\alpha$  (IFN- $\alpha$ ), interferon- $\beta$  (IFN- $\beta$ ), IFN- $\delta$ , IFN- $\alpha$ 1, IFN- $\alpha$ 2, IFN- $\alpha$ 2a, IFN- $\alpha$ 2b, IFN- $\alpha$ 4, IFN- $\alpha$ II1, IFN- $\alpha$ Con1, IFN- $\alpha$ LE, IFN- $\alpha$ Ly or  
10 IFN- $\beta$ 2.

10. The method of claim 9 wherein the type I interferon is a combination of IFN- $\alpha$  and IFN- $\beta$ .

11. The method of claim 1 or 4 wherein the rodent is a mouse.  
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12. The method of claim 1 wherein the mouse is a C57BL/6 mouse.

13. The method of claim 4 wherein the mouse is a C57BL/6 mouse or a BALB/c mouse.  
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14. The method of claim 12 wherein the mouse is a transgenic mouse.  
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15. The method of claim 12 wherein the mouse is a knockout mouse.

16. The method of claim 12 wherein the mouse is a severe combined immunodeficient mouse.  
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17. The method of claim 12 wherein the mouse is a recombination activation gene deficient mouse.

18. The method of claim 1 or 4 wherein the rodent is a rat.  
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19. A method for generating antibodies in a C57BL/6 mouse

comprising the steps of sequentially:

- a) administering Flt3L to the mouse;
- b) administering a combination of IFN- $\alpha$  and IFN- $\beta$  to the mouse;
- 5 c) immunizing the mouse with an antigen; and
- d) isolating antigen-specific antibodies.

20. A method for generating antibodies in a C57BL/6 mouse comprising the steps of sequentially:

- 10 a) administering Flt3L to the mouse;
- b) administering a combination of IFN- $\alpha$  and IFN- $\beta$  to the mouse;
- c) immunizing the mouse with an antigen;
- d) administering a CD40 agonist; and
- 15 e) isolating antigen-specific antibodies.

21. A method for generating antibodies in a BALB/c mouse comprising the steps of sequentially:

- 20 a) administering a combination of IFN- $\alpha$  and IFN- $\beta$  to the mouse;
- b) immunizing the mouse with an antigen;
- c) administering a CD40 agonist; and
- d) isolating antigen-specific antibodies.

25 22. The method of claim 19 or 20 wherein Flt3L is administered in an amount of about 8.8  $\mu$ g to about 10  $\mu$ g per day over a period of about 10 days to about 14 days.

30 23. The method of claim 19, 20 or 21 wherein the IFN- $\alpha/\beta$  combination is administered in an amount of about  $10^5$  U to about  $2 \times 10^5$  U each of IFN- $\alpha$  and IFN- $\beta$  daily for about 3 days to about 5 days.

35 24. The method of claim 20 or 21 wherein the CD40 agonist is an anti-CD40 antibody.

25. The method of claim 24 wherein the anti-CD40 antibody is

administered in an amount of about 50 µg to about 100 µg per dose.